AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the present application.

Listing of Claims:

1. (**Currently Amended**) A method for calculating the activity of a cyclin-dependent kinase in a sample prepared from a living cell comprising the steps of:

~~preparing a sample from living cells;~~

catching the cyclin-dependent kinase in the sample by an anti-cyclin-dependent kinase antibody;

reacting adenosine 5'-O-(3-thiotriphosphate) (ATP-γS) with a substrate for the cyclin-dependent kinase in presence of the cyclin-dependent kinase in order to introduce a monothiophosphate group into a serine or threonine residue of the substrate, the substrate not containing a sulfur atom;

placing the reacted substrate on a membrane;

coupling a labeling fluorophore or a labeling enzyme with a sulfur atom of the introduced monothiophosphate group of the substrate on the membrane;

washing the membrane to remove the fluorophore or the enzyme which is not coupled with the substrate;

measuring the amount of fluorescence from the labeling fluorophore, or reacting the labeling enzyme with a substance to generate an optically detectable product and measuring the amount of the generated product; and

~~labeling the substrate by coupling a labeling fluorophore or a labeling enzyme with a sulfur atom of the introduced monothiophosphate group;~~

~~removing the fluorophore or the enzyme not labeling the substrate from the labeled substrate;~~

~~measuring the amount of fluorescence from the labeling fluorophore labeling the substrate, or reacting the labeling enzyme labeling the substrate with a substance which generates an optically detectable product by reaction with the labeling enzyme and optically measuring the amount of the generated product; and~~

calculating the activity of the cyclin-dependent kinase from the measured amount of fluorescence or the measured amount of the generated product with reference to a pre-produced reference curve.

2. **(Previously Presented)** The method according to claim 1, wherein the cyclin-dependent kinase is selected from the group consisting of CDK1, CDK2, CDK4 and CDK6.

3. **(Original)** The method according to claim 1, wherein the labeling fluorophore is a fluorescent dye.

4. **(Original)** The method according to claim 3, wherein the fluorescent dye is FITC.

5. **(Original)** A method according to claim 1, wherein the labeling enzyme is peroxidase.

6. **(Currently Amended)** ~~A method according to any one of claims 1 to 5,~~ The method according to claim 1, wherein the cyclin-dependent kinase is CDK1 or CDK2 and the substrate is histone H1.

7. **(Currently Amended)** ~~A method according to any one of claims 1 to 5,~~ The method according to claim 1, wherein the cyclin-dependent kinase is CDK4 or CDK6 and the substrate is Rb whose cysteine residue is substituted by alanine.

8-9. **(Cancelled)**

10. **(Currently Amended)** A method for obtaining the activity of a cyclin-dependent kinase in a sample prepared from a living cell comprising the steps of:

~~preparing a sample from living cells;~~

catching the cyclin-dependent kinase in the sample by anti-cyclin-dependent kinase antibody;

reacting adenosine 5'-O-(3-thiotriphosphate) (ATP-γS) with a substrate for the cyclin-dependent kinase in presence of the cyclin-dependent kinase in order to introduce a

monothiophosphate group into a serine or threonine residue of the substrate, the substrate not containing a sulfur atom;

placing the reacted substrate on a membrane;

coupling a labeling fluorophore or a labeling enzyme with a sulfur atom of the introduced monothiophosphate group of the substrate on the membrane;

washing the membrane to remove the fluorophore or the enzyme which is not coupled with the substrate;

measuring the amount of fluorescence from the labeling fluorophore, or reacting the labeling enzyme with a substance to generate an optically detectable product and measuring the amount of the generated product; and

~~labeling the substrate by coupling a labeling fluorophore or a labeling enzyme with a sulfur atom of the introduced monothiophosphate group;~~

~~removing the fluorophore or the enzyme not labeling the substrate from the labeled substrate;~~

~~measuring the amount of fluorescence from the labeling fluorophore labeling the substrate, or reacting the labeling enzyme labeling the substrate with a substance which generates an optically detectable product by reaction with the labeling enzyme and optically measuring the amount of the generated product; and~~

obtaining the activity of the cyclin-dependent kinase from the measured amount of fluorescence or the measured amount of the generated product.

11. **(New)** The method according to claim 1, wherein the membrane comprises a hydrophobic part.

12. **(New)** The method according to claim 1, wherein the membrane comprises poly(vinylidene fluoride) (PVDF).

13. **(New)** The method according to claim 1, further comprising the step of blocking the membrane after the step of placing the substrate on the membrane.

14. **(New)** The method according to claim 13, wherein the membrane is blocked by an albumin.